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Abstract: Avoidance goals heighten the salience of negative social experiences, and in intimate relationships such an orientation may contribute to communication difficulties and the perpetuation of avoidance. We therefore hypothesized that individuals with stronger avoidance goals would be particularly prone to engage in escalating levels of negative communication with their intimate partner, and we tested this prediction by conducting sequential analyses on videotaped observational data (28,470 observations) collected from 365 heterosexual couples engaging in a relationship-related conflict. While less avoidance-oriented spouses showed a decline in their likelihood of negative communication over the course of the 8-min conflict discussion, the likelihood that more avoidance-oriented spouses would display negative communication behaviors remained at a high level. The likelihood of negative communication even increased when avoidance-oriented spouses were confronted with negative communication behavior of their partners. The effects of avoidance orientation were independent of relationship satisfaction and neuroticism. These findings demonstrate that avoidance goals underlie individuals' heightened reactivity to the partner's negative behavior, while also clarifying 1 possible reason why some individuals engage in communication behaviors that may prove maladaptive to their relationship. (PsycINFO Database Record

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Avoidance Orientation and the Escalation of Negative Communication in Intimate Relationships

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Abstract

Avoidance goals heighten the salience of negative social experiences, and in intimate relationships such an orientation may contribute to communication difficulties and the perpetuation of avoidance. We therefore hypothesized that individuals with stronger avoidance goals would be particularly prone to engage in escalating levels of negative communication with their intimate partner, and we tested this prediction by conducting sequential analyses on videotaped observational data (28,470 observations) collected from 365 heterosexual couples engaging in a relationship-related conflict. While less avoidance-oriented spouses showed a decline in their likelihood of negative communication over the course of the eight-minute conflict discussion, the likelihood that more avoidance-oriented spouses would display negative communication behaviors remained at a high level. The likelihood of negative communication even increased when avoidance-oriented spouses were confronted with negative communication behavior of their partners. The effects of avoidance orientation were independent of relationship satisfaction and neuroticism. These findings demonstrate that avoidance goals underlie individuals' heightened reactivity to the partner's negative behavior, while also clarifying one possible reason why some individuals engage in communication behaviors that may prove maladaptive to their relationship.

Keywords: avoidance goals, romantic relationship, negative communication, observational data, sequential analysis

Avoidance Orientation and the Escalation of Negative Communication in Intimate Relationships

Although ineffective interactional processes between intimate partners have long been understood as skill deficits that foreshadow distress and dissolution in close relationships, existing work fails to address whether these processes are emergent features of the relationship itself (e.g., Gottman, 1994) or products of the enduring traits and characteristics partners bring to the relationship (Karney & Bradbury, 1995). Building on work showing that partners' motivational orientations—particularly their tendency to approach positive or avoid negative experiences—can affect whether they cultivate satisfying and enduring relationships (Elliot, Gable, & Mapes, 2006; Gable & Impett, 2012), we propose that interpersonal communication can be understood as a sequence of goal-directed behaviors that reflect and express spouses' underlying motivations. As avoidance-oriented individuals in particular react more strongly with negative affect in threatening situations (Derryberry & Reed, 1994; Gable, 2006), these spouses may be especially likely to engage in, and perpetuate, reciprocated cycles of negativity. We use observational data on couple communication and sequential analyses with a large sample of couples to test this possibility, in an effort to clarify underlying sources of between-couple variability in relationship conflict.

Observation of Negative Communication in Couples

A long tradition of research on couples adopts the premise that relationship satisfaction is strongly associated with the behaviors that partners exchange (Bodenmann, Kaiser, Hahlweg, & Fehm-Wolfsdorf, 1998; Jacobson & Margolin, 1979; Karney & Bradbury, 1995), and observational research testing this premise demonstrates that behaviors displayed by spouses while discussing relationship difficulties are reliably related to relationship satisfaction (e.g.,

Bradbury & Karney, 1993; Woodin, 2011). Because negative events and stimuli appear to have a relatively stronger impact on cognition, affect, and behavior than positive events and stimuli, in general (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001) and in the context of intimate relationships (Gottman, 1998), the present research addresses processes that focus on negative communication in couples.

Most research on communication in couples relies on laboratory-based observation of behavior and verbal interaction during a standard conflict interaction, and intensive coding of these interactions has yielded important insights into how couples negotiate their differences. According to Gottman (1994), problem-solving conversations often progress predictably through stages, beginning with a *start-up* phase in which both partners attempt to set the agenda for the discussion by presenting their views and feelings. The subsequent *arguing* phase is distinguished by relatively high levels of emotion, especially negative emotion, as partners express and defend their perspectives while also attempting to critique the mate's opinion and intentions (e.g., *"If you stopped to listen for two seconds you would understand my point better!")*. Efforts to integrate and reconcile competing views are evident in the arguing phase, and these are often accompanied by anger, frustration, whining, and sadness. Mutual repair attempts often follow as partners, particularly those in more satisfying relationships, recognize common ground and work to reduce negativity with information exchange, problem-solving, humor, and distraction. This is hypothesized to give way to the final *negotiation* stage, in which couples reach some kind of resolution and, if possible, discuss how to implement any new strategies.

Couples vary widely in how they navigate these phases, and while expressions of negative emotion are common during conflict, they can also prove costly if they are mismanaged. Reciprocated and escalating forms of negative affect are believed to be particularly pernicious, as

they create self-sustaining cycles that are difficult to exit once entered, leaving both partners feeling misunderstood and less inclined to engage difficult problems in the future. Although these patterns of interaction are largely understood as malleable skill deficits, we propose that at least some of the variation in these patterns may also reflect enduring individual differences in partners' motivational orientations. Addressing this possibility is particularly important in view of weak and non-significant associations between Big Five personality traits and observed couple behaviors (Caughlin, Huston, & Houts, 2000; Donnellan, Conger, & Bryant, 2004; Karney & Bradbury, 1997).

Approach-Avoidance Relationship Goals in Couples

Approach and avoidance orientation are commonly viewed as independent and distinct motivational systems (Atkinson, 1957; Carver, Sutton, & Scheier, 2000; Higgins, 1997). Approach orientation promotes movement towards desired end states, whereas avoidance orientation increases movement away from undesired end states (Elliot & Thrash, 2002; Gray, 1990). Approach and avoidance goals predict different social outcomes (Gable, 2006); while approach goals are associated with outcomes defined by the presence of rewarding experiences (e.g., intimacy and closeness), avoidance goals are associated with outcomes defined by the presence of punishing experiences or threats (e.g., rejection and conflict). Recent work has applied this approach-avoidance distinction to relationship goals. Approach relationship goals are associated with greater closeness on a daily basis and with an increase in relationship satisfaction over time (Gable & Poore, 2008; Impett et al., 2010). Avoidance goals, on the other hand, are associated with reduced relationship satisfaction, more feelings of loneliness, and greater relationship insecurity (Gable, 2006; Gable & Berkman, 2008; Gable & Poore, 2008), while also predicting a higher probability of separation (Impett, Peplau, & Gable, 2005).

With growing evidence that individuals' goal orientation can put them at risk for adverse relationship outcomes, there is a growing need to understand how avoidance in particular instigates relationship experiences that leave partners frustrated and disenchanted. A stronger avoidance orientation covaries with better memory for negative information (Strachman & Gable, 2006), and while individuals higher in avoidance orientation weigh thoughts of security more heavily than those low in avoidance orientation, individuals higher in approach orientation weigh thoughts of passion more heavily compared to those low in approach orientation (Gable & Poore, 2008). Thus, avoidance orientation affects cognitive processes such as memory and the interpretation of ambiguous information and affective cues; this heightened focus on negative outcomes or events, which is inherent in avoidance regulation, is in turn "likely to elicit and sustain threat appraisals, anxiety and self-protection processes, as the individual is incessantly reminded of aversive possibilities" (Elliot & Sheldon, 1998, p. 1283). Furthermore, different processes have been identified underlying the association of approach goals and social outcomes compared to avoidance goals and social outcomes (Gable, 2006; Gable, Reis, & Elliot, 2000). Approach-oriented individuals are more likely to initiate social interactions as a means of creating the opportunity for rewarding social situations. Avoidance-oriented individuals, on the other hand, are guided by a *reactivity process* whereby they react more strongly to negative social events when they occur. When negative social events do occur, individuals high in avoidance goals rate them as more important than those individuals low in avoidance goals and also react with more negative emotions (Elliot et al., 2006; Gable, 2006; Gable et al., 2000). In other words, while approach orientation is associated with the frequency of social events, avoidance orientation is associated with the quality of social events. Even though assumptions about the effect of avoidance goals on the quality of romantic relationships in general, and the

reactivity process hypothesis in particular, imply a behavioral reaction pattern in high avoidance-oriented individuals, previous research focuses far more on cognitions and affective states than on observable interpersonal behaviors.

Avoidance Goals and Negative Communication

The present study builds on these separate lines of research by examining avoidance orientation in relation to negative communication behaviors in couples, under the assumption that patterns in couple communication will reflect partners' goal orientation toward each other and toward their relationship. As no study to date has examined the effect of avoidance goals on observed communication behaviour, we asked couples to engage in a standard interaction task that is known to elicit conflict and negativity between partners. Because avoidance orientation (compared to approach orientation) plays an important role in instances of threat or the possibility of a negative social evaluation, we focused on individual levels of avoidance orientation in relationship partners and its association with negative communication behavior during conflict. Prior work on avoidance motivation leads us to predict that, due to the reactivity process, the more avoidance-oriented an individual is the more likely he or she will display negative communication behaviors over the course of the conflict interaction.

Because of the inclination to avoid negative events, it may seem counterintuitive to predict that avoidance-oriented individuals will engage in *more* negative communication. However, it is important to recognize that avoidance regulation is "designed to facilitate surviving rather than thriving" (Elliot, Thrash, & Murayama, 2011, p. 666). Thus avoidance-oriented spouses may overuse avoidance strategies and engage in aversive, avoidance-based regulation strategies. Moreover, research on attention, memory, and cognitive control suggests that focusing on negative outcomes or events produces a perceptual sensitivity to negative stimuli and heightens

accessibility of negative information (Derryberry & Reed, 1994; Higgins & Tykocinski, 1992; Wegner, 1994). Active pursuit of avoidance goals therefore may increase the amount of negative feedback encountered, which in turn may diminish perceptions of acceptance and intimacy (Elliot et al., 2011). In other words, the environment of a highly avoidance-oriented individual mainly provides negative signals and information, and their attentional bias for threats may make it difficult for them to disengage from aversive stimuli (Fox, Russo, & Dutton, 2002; Gable & Berkman, 2008). These perceptions of rejection then elicit cognitive-affective overreactions including hurt and anger which, in turn, make the display of behavioral overreactions more likely. Consistent with this view, anxious expectations of rejection in men predict dating violence (Downey, Feldman, & Ayduk, 2000). Thus, opportunities to thrive are missed, and reciprocity mechanisms and concerns regarding rejection lead to negative reactions in order to reduce tension (Downey et al., 2000; Elliot et al., 2011; Heyman, 2001).

Accordingly, we hypothesize that (1) the more avoidance-oriented an individual is the more likely he or she will amplify negative communication over the course of the conflict interaction and that (2) this tendency will be especially evident in instances when negative communication is displayed by the partner. When confronted with negative communication, individuals endorsing a higher avoidance orientation are expected to escalate in their negative communication in response, leading to a reciprocated pattern of negative communication between partners over the course of a conflict interaction task. We further hypothesize that these effects are driven primarily by the motivational tendency of avoidance orientation and that these effects will not be affected by the influence of possible third variables such as relationship satisfaction and individual differences in personality, namely neuroticism. Finally, we were interested in whether patterns of negative communication affect partners' subjective experience beyond the conflict

discussion. We expect that escalation of negative communication is associated with an increase in negative feelings from before to after the conflict discussion as partners will very likely recognize this escalation.

Method

The present study is part of a larger research project on the impact of stress on relationship development of couples and children across the lifespan.

Procedure and Participants

The study was advertised in newspapers and on the radio as a study on the impact of stress on relationship development of couples. Interested couples were contacted by telephone and informed about the procedure of the study. If interested couples agreed to participate they were sent a first set of self-report measures. They were requested to complete the questionnaires independently from one other at home and to bring the questionnaires with them to the laboratory. At the laboratory, both partners had to agree to the informed consent and were then escorted to separate rooms where they completed two sets of questionnaires. Couples then participated in three videotaped interaction tasks: one standard conflict interaction task and two tasks of mutual support. For the purpose of this study, i.e., the examination of negative communication behaviors, data from the standard conflict interaction task will be used. Finally, both partners were again separated for the last set of questionnaires before they received a debriefing and 100 Swiss Francs (approximately $108). The procedure was evaluated and approved by the local ethics committee.

A total of 368 Swiss heterosexual couples participated in the study. To be eligible, couples had to be in their current relationship for at least one year. Three couples were removed from the analyses because of missing video data: One sequence was missing because of technical

problems, one sequence had to be deleted after recording upon request of the couple, and one couple refused to be videotaped. Of the remaining 365 couples, 241 couples were married (66.0%) and 236 couples had children (64.7%). Participants ranged in age from 20 to 80 years with a mean age of 47 years (*SD* = 18.40) for women and 49 years (*SD* = 18.20) for men. Mean relationship duration was 21 years (*SD* = 17.88; ranged from 1 year to 60 years). As for highest level of education completed, for women, 6% attended the mandatory school years (nine years), 40% completed vocational training, 21% completed high school, and 32% completed college or university. For men, 3% attended the mandatory school years (nine years), 35% completed vocational training, 12% completed high school, and 49% completed an academic degree. Couples reported a relatively high relationship satisfaction with *M* = 4.33 (*SD* = .50) for women, and *M* = 4.38 (*SD* = .49) for men on the 5-point scale of the German Version of the RAS (Relationship Assessment Scale; Hendrick, 1988; Sander & Böcker, 1993).

Measures

Avoidance orientation. Goal orientation was assessed with a measure of approach and avoidance romantic relationship goals (originally developed by Elliot et al., 2006; adapted for romantic relationships by Gable, 2006; Impett, Strachman, Finkel, & Gable, 2008). Participants received the following instructions: "Within a relationship, different goals can be pursued. Please indicate for each goal to what extent you are trying to achieve this goal within the next year". Avoidance relationship orientation was assessed with four items, such as "I will be trying to avoid disagreements and conflicts with my romantic partner", or "I will be trying to stay away from situations that could harm my relationship" on a 7-point scale (1 = *not at all true* to 7 = *very true*; α = .76 for women and .73 for men).

Communication behavior. For the conflict interaction, both partners identified a source of

tension in their relationship that they would like to discuss with each other. To help partners identify primary areas of couple immanent stress, a list of most common problem areas was used (PAQ A; Heavey, Christensen, & Malamuth, 1995). Respondents rated their degree of stress regarding 13 areas within their relationship, for instance communication with the partner, sexuality, finances, children, or annoying habits of the partner on a 4-point scale (1 = *undemanding* to 4 = *very demanding*). Additionally, participants were allowed to freely add three additional areas of stress. The couple had to agree on one issue from the PAQ A that either caused the high tension for both partners, or caused high tension in one partner but not in the other partner. The most frequently discussed topic was communication with the partner (n = 54, 14.7 %), followed by annoying habits of the partner (n = 43, 11.7%), followed by finances (n = 38, 10.4%). Participants were then asked to discuss this relationship-relevant issue for 8 minutes while being videotaped.

To code communication behavior that spouses displayed in this interaction, an adapted version of the SPAFF (Gottman, 1994) was used.[1] The interaction coding system consisted of different verbal categories regarding negative communication (i.e., criticism, defensiveness, domineering, stonewalling, interruption, contempt, belligerence). Two research assistants were trained to rate communication behavior. Each rater had to practice coding procedures on video-taped couple interactions that were not part of this study for at least 60 hours. At the end of the training period, Cohen's kappa indicated that the raters had achieved an acceptable interobserver agreement (kappa = .90). Each interaction sequence was rated by the two raters simultaneously; one focusing on the man, the other focusing on the woman. Interactions were divided into 48 sequences, 10 sec each, to allow for the possibility that multiple categories could occur during the 8 min interaction. Each sequence was coded for the occurrence of any negative

communication behavior with either *0 = no negative communication occurred,* or *1 = negative communication occurred.* According to Gottman (1994), most couples express most negative affect during the arguing phase of the conflict interaction. Indeed, we found that the average likelihood of negative communication increased over the first 9 sequences and peaked at the 10th sequence. Thus, we treated the first 90 seconds (9 sequences) of the interaction as a warm-up phase and included the remaining 6.5 min (39 sequences) in the analyses.

Control variables. We assessed relationship satisfaction and neuroticism to test alternative hypotheses. Relationship satisfaction was assessed with the German version of the relationship assessment scale (RAS; Hendrick, 1988; Sander & Böcker, 1993). The RAS assesses relationship satisfaction with seven items, such as "In general, how satisfied are you with your relationship?" or "How often do you wish you hadn't gotten into this relationship?" (reverse coded) on a 5-point scale with various verbal anchors according to how the items are phrased (α = .84 for women and .84 for men). Neuroticism was assessed with the German adaptation of the NEO Personality Inventory in its revised form (Ostendorf & Angleitner, 2004). Participants responded to 48 items, such as "I often feel tensed and jittery". Responses were made on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*; α = .92 for women and .91 for men).

Subjective experience. We measured participants' emotional state prior to and directly after the conflict interaction. Participants indicated their current emotional state on four bipolar dimensions that were averaged with higher values indicating more negativity (adapted from Steyer, Schwenkmezger, Notz, & Eid, 1994), namely "good mood vs. upset", "placid/serene/relaxed vs. irritated/provoked/angry", "cheerful/happy vs. sad/in low spirits", and "calm/at ease vs. stressed/nervous" (1 = v*ery much*, 2 = *much*, 3 = *a little*, 4 = *a little*, 5 = *much*, 6 = *very much;* $\alpha_{prior/after}$ =.78/.86 for women and .71/.81 for men).

Results

Descriptive Statistics

Table 1 summarizes the descriptive statistics and zero-order correlations for the main variables of the study. The average probability of negative communication among participants ranged from .00 (0 out of 39 sequences) to .85 (33 out of 39 sequences) with $M = .10$, $SD = .13$ (3.94 out of 39 sequences). There were no gender differences regarding displayed negative communication, $t < 1$, *ns*, or regarding relationship satisfaction, $t < |1.66|$, *ns*. However, men reported marginally stronger avoidance orientations compared to women, $t(362) = -1.66$, $p = .097$, whereas women reported higher levels of neuroticism, $t(363) = 8.12$, $p < .001$, and higher levels of negative feelings prior to, $t(344) = 4.11$, $p < .001$, and after the conflict discussion, $t(343) = 4.46$, $p < .001$, compared to men.

For men and women avoidance orientation was not significantly related to overall levels of negative communication (i.e., the sum of negative communication interactions). Relationship satisfaction was inversely related to negative communication, such that happier couples communicated less negatively. These correlational patterns are in line with our predictions that avoidance motivation is only related to negative communication *over time* as couples seek for a resolution of a conflict and *in interaction* with negativity from the partner, but not to overall levels of negative communication. Further, since relationship satisfaction and neuroticism (among women) were both related to negative communication, it is important to rule out that effects of avoidance motivation on negative communication over time were dependent on the effects of relationship satisfaction and neuroticism on negative communication. Lastly, levels of negative communication were not significantly associated with mean levels of emotional state prior and after the conflict discussion. However, it is likely that change of negative

communication *over time* is associated with *change* in emotional state.

Data Structure and Preliminary Analyses

The dataset consisted of 365 (couples) x 2 (persons) x 39 (sequences) = 28'470 observations. Although conceptually there are three levels within our data (sequences nested within persons nested within couples), new approaches suggest that longitudinal data from distinguishable dyads should be modelled with two levels of analysis (for further details see Bolger & Laurenceau, 2013). Thus Level 1 represents variability due to within-person repeated measures and Level 2 represents between-dyad variability (see Laurenceau & Bolger, 2005; Raudenbush, Brennan, & Barnett, 1995, for more details). One consequence of this approach is that one has to test for gender and gender-specific effects using dummy coded gender variables in conjoint multilevel models (Kenny, Kashy, & Cook, 2006). We followed a two-step procedure in our analyses: First, we used a double entry method to detect potentially differing effects for female and male spouses, and second, we tested whether effects for men and women differed significantly in a conjoint model using a single entry method but adding interaction effects (e.g., interactions with dummy coded gender variable). We applied this two-step procedure to the unconditional model, testing Hypothesis 1, as well as to the conditional model, testing Hypothesis 2. This approach is based on comparing unconditional probabilities (the chance that a certain behavior occurs at all) with the conditional probabilities (the chance that a certain behavior occurs, given partner's behavior occurs; see Butler, 2011).

Our primary dependent variable was negative communication of the spouse within a specific sequence, which was coded as a binary variable (0 = no negative communication, 1 = negative communication). Therefore, we used generalized mixed linear model with a logit link function. In this model, the probability of negative behavior within a sequence can be determined by the

following equation (for further details see also Tabachnick & Fidell, 2014):

$$P(Y = 1) = \frac{e^{(\beta_0 + \beta_1 X_1 \ldots + \beta_n X_n)}}{1 + e^{(\beta_0 + \beta_1 X_1 \ldots + \beta_n X_n)}} \quad (1.0)$$

When $\beta_n < 0$, the coefficient indicates a decrease in the probability of negative behavior for an increase in the associated predictor (X_n); for $\beta_n > 0$ an increase in the predictor signifies an increase in the probability of negative behavior.

Before running the analyses, we treated the predictor variables as follows: Sequences were centered at the first sequence of the arguing phase such that it ranged from 0 to 38 (Time). Avoidance motivation was grand-mean centered (AVmc) by subtracting the mean of avoidance motivation across all participants (*M* = 4.97, *SD* = 1.40, Range: 1.00 - 7.00) from each participant's raw score. The partner's negative communication was a binary predictor (NPC, 0 = no negative partner communication; 1 = negative partner communication) for which no further centering is needed (Hoffman & Stawski, 2009). However, because we were interested in the pure within-dyad effect of negative partner communication, we created a second variable that represents the between-dyad variation in negative partner communication that served as control variable in the final model. To do this, we calculated the average negative communication across all sequences for each person and then subtracted the grand-mean of negative communication (*M* = 0.10, *SD* = 0.13, Range: 0.00 - 0.85). The resulting grand mean-centered score captures the deviation of each person from the average person in negative communication (NPCmc). The models were estimated in R (version 3.0.1; R Core Team, 2013) using the lme4 package (Bates, Maechler, Bolker, & Walker, 2013).

Avoidance Orientation Predicting Trends in Negative Communication Over Time

In a first unconditional model, we tested whether avoidance motivation predicted the stability of negative communication over the course of the arguing phase. More specifically, we tested whether individuals with higher avoidance motivation displayed more stable negative communication over the course of the interaction than individuals with lower avoidance motivation, who should show some resolution of the conflict and a downwards trend in negative communication. That means, in this model, we examine the effects of time and avoidance motivation as well as their interaction on the probability of negative communication within a specific sequence of the interaction independently (unconditional) from the other partner's negative communication.

Equation 1.1 and 1.2 represent the paired Level 1 equations for male and female partners, which are represented by an intercept and a slope for time, both of which are predicted by variables at Level 2 (equations 1.3 through 1.6). At Level 2 the intercept was predicted by partner's avoidance motivation (γ_{01M} and γ_{01F}) and a random variance component (u_{0jM} and u_{0jF}; equation 1.3 and 1.4). Further, the effect of time was predicted by the spouse's avoidance motivation (γ_{11M} and γ_{11F}; equation 1.3 and 1.4). As avoidance motivation is a Level 2 predictor and time a Level 1 predictor, γ_{11M} and γ_{11F} represent cross-level interactions. These interactions capture whether negative communication unfolded differently over time depending on the avoidance motivation of the spouse. The estimate of this interaction should be significant for men and women, if our first hypothesis is correct.

$$\ln\left(\frac{p_{Mij}}{1-p_{Mij}}\right) = \beta_{0jM} + \beta_{1jM}\left(Time_{ij}\right) \qquad (1.1)$$

$$\ln\left(\frac{p_{Fij}}{1-p_{Fij}}\right) = \beta_{0jF} + \beta_{1jF}\left(Time_{ij}\right) \quad (1.2)$$

$$\beta_{0jM} = \gamma_{00M} + \gamma_{01M}\left(AVmc_{jM}\right) + u_{0jM} \quad (1.3)$$

$$\beta_{0jF} = \gamma_{00F} + \gamma_{01F}\left(AVmc_{jF}\right) + u_{0jF} \quad (1.4)$$

$$\beta_{1jM} = \gamma_{10M} + \gamma_{11M}\left(AVmc_{jM}\right) \quad (1.5)$$

$$\beta_{1jF} = \gamma_{10F} + \gamma_{11F}\left(AVmc_{jF}\right) \quad (1.6)$$

The results of the unconditional model are summarized in Table 2. The intercept of the model represents the probability of negative communication for men and women when all other variables in the model are zero. According to our centering the intercept refers to the probability of negative communication in the first sequence ($Time_{ij}$ = 0) for a spouse with average level of avoidance motivation (grand mean centered: $AVmc_{jM}$ = 0; $AVmc_{jF}$ = 0). Results showed that women were more likely to communicate negatively than men. The probability for negative communication during the first sequence of the arguing phase for a spouse with average avoidance motivation was 7.2% for women and 4.3% for men. These probabilities can be obtained by inserting the coefficient for the intercept into Equation 1.0 presented above (assuming that all other coefficients are zero, i.e., first sequences, average avoidance motivation).

The effect of time was significant for women, but not for men. The later the sequence the less likely women with average avoidance motivation were to communicate negatively. Further, there was no effect of avoidance motivation on the initial level of negative communication for women, but a marginal significant main effect for men. Overall, men seemed to initially communicate less negatively to the extent they were higher in avoidance motivation. Most important for our hypothesis was the significant positive estimate for the interaction between

time and avoidance motivation for women. The interaction was not significant for men, but the estimate was also positive and about the size of the women's estimate. The pattern of the interaction is displayed in Figure 1. As predicted, for women low in avoidance motivation (-1 SD) the likelihood of negative communication decreased over time. Women high in avoidance motivation (+1 SD) did not decrease in negative communication but remained at the same level of negative communication throughout the interaction. For men, the pattern was located at a different level because they already started out with less negative communication. However, the trends of the different lines for low and high avoidance motivation were still similar to those of women. For men low in avoidance motivation the likelihood of negative communication decreased over time, for men high in avoidance motivation the likelihood of negative communication did not show a decrease over the course of the interaction.

To test whether the two-way interaction differed significantly between genders, we estimated a conjoint generalized linear model and tested for a three-way interaction between time, avoidance motivation (grand-mean centered), and an effect-coded gender variable (1 = men; -1 = women). The three-way interaction with gender was not significant, $b = -.001,\ se = .001, p = .293$, whereas the two-way interaction between time and avoidance motivation was significant, $b = .004, se = .001, p = .002$. This suggests, for women and men, there is an interaction between time and avoidance motivation and that there is no difference with respect to the interaction in the two-intercept model.

Avoidance Orientation Predicting Trends in Negative Communication Conditional Upon the Partner's Negative Communication

In the conditional model, we tested whether the effect of time and avoidance motivation on the likelihood of negative communication was moderated by partner's negative communication.

This hypothesis refers to a within-dyad process whereby negative communication from one partner within a specific sequence affects the communication of the other partner within the same sequence. To test the pure within-dyad effects we needed to control for between-dyad differences in partner's negative communication at Level 2 (Graber, Laurenceau, & Carver, 2011; see also Hoffman & Stawski, 2009).

Equations 2.0 and 2.1 represent the Level 1 model predicting the likelihood of negative communication by the effect of time ($Time_{ij}$), the effect of negative communication of the partner within a specific sequence (NPC_{ij}) and their two-way interaction effect ($Time_{ij} \times NPC_{ij}$). Equations 2.2 through 2.9 represent the Level 2 model. The average Level 1 intercept corresponds to a gender-specific grand mean in negative communication (γ_{00M} and γ_{00F}); deviations from the grand mean are captured by the avoidance motivation of the individual (γ_{01M} and γ_{01F}), his or her partner's general tendency to communicate negatively (NPCmc; γ_{02M} and γ_{02F}) and a random variance component (u_{0jM} and u_{0jF}; see equations 2.2 and 2.3). The effect of time was predicted by the avoidance motivation of the person (γ_{02M} and γ_{02F}), which represents the same two-way interaction as examined in the unconditional model. Further, on Level 2, differences in the effect of partner's negative communication within the sequence were predicted by the avoidance motivation of the individual (γ_{21M} and γ_{21F}), representing the cross-level two-way interaction between the effect of partner's negative communication within a sequence and the individual's avoidance motivation. Finally, differences in the two-way interaction effect between time and partner communication at Level 1 were predicted by the individual's avoidance motivation (γ_{31M} and γ_{31F}), which represents the three-way interaction between time, avoidance motivation and negative partner communication. If Hypothesis 2 is correct, this three-way interaction should be significant for men and women.[2]

$$\ln\left(\frac{p_{Mij}}{1-p_{Mij}}\right)=\beta_{0jM}+\beta_{1jM}\left(Time_{ij}\right)+\beta_{2jM}\left(NPC_{ij}\right)+\beta_{3jM}\left(Time_{ij}\times NPC_{ij}\right) \quad (2.0)$$

$$\ln\left(\frac{p_{Fij}}{1-p_{Fij}}\right)=\beta_{0jF}+\beta_{1jF}\left(Time_{ij}\right)+\beta_{2jF}\left(NPC_{ij}\right)+\beta_{3jF}\left(Time_{ij}\times NPC_{ij}\right) \quad (2.1)$$

$$\beta_{0jM}=\gamma_{00M}+\gamma_{01M}\left(AVmc_{jM}\right)+\gamma_{02M}\left(NPCmc_{jM}\right)+u_{0jM} \quad (2.2)$$

$$\beta_{0jF}=\gamma_{00F}+\gamma_{01F}\left(AVmc_{jF}\right)+\gamma_{02F}\left(NPCmc_{jF}\right)+u_{0jF} \quad (2.3)$$

$$\beta_{1jM}=\gamma_{10M}+\gamma_{11M}\left(AVmc_{jM}\right) \quad (2.4)$$

$$\beta_{1jF}=\gamma_{10F}+\gamma_{11F}\left(AVmc_{jF}\right) \quad (2.5)$$

$$\beta_{2jM}=\gamma_{20M}+\gamma_{21M}\left(AVmc_{jM}\right) \quad (2.6)$$

$$\beta_{2jF}=\gamma_{20F}+\gamma_{21F}\left(AVmc_{jF}\right) \quad (2.7)$$

$$\beta_{3jM}=\gamma_{30M}+\gamma_{31M}\left(AVmc_{jM}\right) \quad (2.8)$$

$$\beta_{3jF}=\gamma_{30F}+\gamma_{31F}\left(AVmc_{jF}\right) \quad (2.9)$$

Results of the conditional model are also summarized in Table 2. There was a significant effect for negative partner communication within the sequence for women and men. In sequences with negative communication by the partner, spouses were more likely to communicate negatively as well. Importantly, in this model, the three-way interaction between time, avoidance motivation, and partner's negative communication was significant for men and marginally significant for women. This effect reflects the reactivity process, namely an increasing probability for the co-occurrence of spouses' and their partner's negative communication over time depending on spouses' avoidance orientation. Because we controlled for the partner's general tendency to communicate negatively at Level 2, the effect is independent of the other partners' overall tendency to communicate negatively. The pattern of the three-way interaction is

displayed in Figure 2. The pattern is almost identical for women and men. The likelihood of negative communication was higher in sequences in which the partner also communicated negatively. But the effect of negative communication of the partner was affecting high avoidance-oriented spouses increasingly over time, while low avoidance-oriented spouses showed decreased negative communication over the course of the interaction despite negative communication from the partner. In other words, as the conflict interaction goes on, individuals high in avoidance motivation are more likely to show negative communication simultaneous to negative communication by their partners. Those who score low in avoidance motivation show simultaneous negativity to negative communication by their partners in the beginning of the arguing phase but over time the likelihood of this simultaneous negativity decreases. If there is *no* negative communication behavior displayed by the partner, the likelihood of negative behavior remains relatively stable at a low level for those scoring low in avoidance motivation and decreases steadily over time for those scoring high in avoidance motivation.

To test whether the three-way interaction differed significantly between genders, a second conjoint generalized linear model was estimated testing for a four-way interaction between time, avoidance motivation (grand-mean centered), negative partner communication, and the effect coded gender variable (1 = men; -1 = women). The four-way interaction was not significant, $b = .001, se = .004, p = .848$, whereas the three-way interaction between time, avoidance motivation, and negative partner communication was significant, $b = .010, se = .004, p = .012$. Hence, for women and for men, there is an interaction between time, avoidance motivation, and negative partner communication.[3]

Exploring Alternative Explanations

To rule out that the effects for avoidance motivation were driven by relationship satisfaction

or neuroticism, we reran the *conjoint unconditional* and the *conjoint conditional model* as described above and additionally controlled for the respective third variable and its interaction effects with time and negative partner communication.

Relationship satisfaction. In the conjoint unconditional model the main effect of relationship satisfaction was highly significant, $b = -.152, se = .068, p = .026$, indicating that spouses with low relationship satisfaction were more likely to show instances of negative communication. The Relationship Satisfaction X Time interaction was also significant, $b = -.008, se = .002, p < .001$. The pattern of this interaction replicates previous research (Gottman, 1998; Heyman, 2001): Spouses with high relationship satisfaction started off with a low likelihood of negative communication (6.1%) and reduced negative communication over the 6.5 minutes of data sampling (3.4%). Spouses with low relationship satisfaction started off with a relatively higher probability of negativity (9.0%) and remained at this high level throughout the conflict interaction task (9.3%). The three-way interaction with gender was not significant, suggesting that relationship satisfaction and time had similar effects for men and women. Most importantly, in this model the two-way interaction between avoidance orientation and time remained significant, $b = .005, se = .002, p = .004$, suggesting that the interaction cannot be explained by relationship satisfaction.

In the conjoint conditional model we predicted negative communication by avoidance orientation and relationship satisfaction, and their respective two-way, three-way, and four-way interactions with time, negative partner communication, and gender. For relationship satisfaction the three-way interaction with time and partner negative communication was not significant, $b = .0004, se = .004, p = .918$, whereas this three-way interaction was still significant for avoidance orientation, $b = .013, se = .005, p = .014$. Partner's communication seems to matter

for the effect of avoidance orientation over time but not for the effect of relationship satisfaction over time. Both four-way interactions with gender were not significant, indicating no differences in these patterns between men and women.

Neuroticism. We ran the same models with neuroticism as third variable but analyses of neither the unconditional model nor the conditional model revealed any significant main or interaction effects. Again, the two-way interaction for avoidance orientation and time (unconditional model) remained significant, $b = .006,\ se = .002, p = .001$, as well as the three-way interaction for avoidance orientation, time, and partner communication (conditional model), $b = .012, se = .005, p = .022$.

To summarize, these findings suggest that relationship satisfaction and neuroticism cannot account for the interaction of avoidance orientation, time, and negative partner communication. Instead, relationship satisfaction seems to have independent effects on spouses' communication.

Change in Subjective Experience

Finally, we were interested in whether the observed patterns of negativity in the conflict interaction (i.e., escalation versus resolution) would affect partners' subjective experience beyond the conflict discussion. Therefore, we estimated couples' change in emotional state subtracting the state score prior from the state score after the conflict interaction. To measure the individual degree of escalation, we ran a random-intercept random-slope multilevel model predicting individuals' negative communication for each sequence. To account for the dependency of the partners the model had three levels (sequences nested in individuals nested in couples). From this model we extracted the individual intercept and the individual slope allowing us to estimate the person specific probability to communicate negatively (1) in the first sequence

and (2) in the last sequence using the logit-link function (Equation 1.0). Then we calculated the individual change in negative communication by subtracting the predicted probability at the first sequence from the predicted probability at the last sequence with lower scores reflecting an upward trend in the probability to communicate negatively (escalation).

We used the probability to communicate negatively in the first sequence and the individual change (increase or decrease to the last sequence) to predict both partners' residual change in their emotional states (prior to after) using an Actor-Partner-Interdependence Model (Kenny, Kashy, & Cook, 2006) using AMOS (Version 20; Arbuckle, 2010). In general, this model accounts for the interdependence of both partners and allows for testing actor (within an individual) and partner (across individuals) effects. The specified model differs from the standard APIM as there are two independent variables per partner and, hence, four actor and four partner effects. Since we did not expect gender differences, we restricted corresponding unstandardized path coefficients of the two partners to be equal (e.g., the effect of the male partners' probability to communicate negatively in the first sequence on their change in emotional state (actor effect) is equal to the same actor effect for female partners).The model showed a good fit to the data, $\chi^2(4) = 4.774$, $p = .311$, CFI = .995, RMSEA = .023. For the probability to communicate negatively in the first sequence we found no significant effects on change in spouses' own negative feelings (actor effect), $\beta_{women} = .03, \beta_{men} = .05, b = .005, se = .005, p = .377$. But spouses' higher probability to communicate negatively in the first sequence predicted an increase in their partners' negative feelings (partner effect), $\beta_{women} = .10, \beta_{men} = .12, b = .01, se = .006, p = .012$. More importantly to our assumption, we found that an escalation in the spouse's negative communication (increase in the probability to communicate negatively) predicted an increase in his or her own negative feelings from prior to

after the conflict discussion (actor effect), $\beta_{women} = -.08, \beta_{men} = -.09, b = -.01, se = .004, p = .038$. The escalation in spouses' negative communication also increased negative feelings in their partner (partner effect), $\beta_{women} = -.07, \beta_{men} = -.09, b = -.01, se = .004, p = .040$. In sum, these findings suggest that an escalation of negative communication during conflict interactions increases negative feelings in couples beyond the fact of being in a conflict interaction itself.

Discussion

Summary

The present study examined the reactivity process (i.e., strong negative reaction to negative social events) proposed for individuals with high avoidance orientation in the context of romantic relationships. Using observational data of 368 couples engaging in a standardized conflict discussion, we tested whether the probability of negative communication escalates over time depending on the avoidance orientation of spouses and negative communication of their partners. Results of the first set of sequence analyses showed that highly avoidance-oriented spouses showed a stable tendency to display negative behavior over the course of the conflict interaction task, while spouses low in avoidance orientation showed resolution and decline in negative communication. In the second set of sequence analyses, we further examined whether the effect of avoidance orientation grows stronger when negative communication was displayed by the partner (conditional model; Butler, 2011). While the probability of negative behavior either decreased over time or remained rather stable for individuals low in avoidance orientation, this was not true for those individuals scoring high in avoidance orientation and who were confronted with negative communication from their partner. For these individuals the likelihood of negative communication increased over time as a reaction to an adverse event. In other words,

avoidance-oriented spouses appear more and more likely to communicate negatively when their partner also shows negative communication behavior. This suggests that avoidance-oriented spouses' negativity in communication escalates over time depending on the negative communication of their partner, thwarting attempts at repairing the interaction and reconciling divergent perspectives.

Additional analyses successfully ruled out relationship satisfaction and neuroticism as alternative explanations for the proposed effects. The literature on couple communication proposes that relationship satisfaction influences communication patterns in couples (Gottman, 1994). Among relatively happy couples negativity declines as they discuss their differences and work toward a resolution, while unhappy couples fail to repair their communication (Gottman, 1994). Although we replicated this pattern for relationship satisfaction in our data, the interaction between avoidance orientation and time remained significant when controlling for this additional factor. Further, the effect of relationship satisfaction was independent of negative partner communication. Taken together, these findings suggest that relationship satisfaction and avoidance orientation influence communication in couples via distinct processes.

Another plausible third variable which we ruled out as alternative explanation was neuroticism. Previous research suggests that avoidance orientation and neuroticism reflect one higher order personality construct (e.g., Elliot, 2006). However, in our data neuroticism did not influence negative communication and the effects for avoidance orientation remained significant when controlling for neuroticism. Thus, the effects seem to be motivational in nature and driven by the endorsement of avoidance goals specifically, and not by a more general personality factor or temperament.

Finally, we found that the observational patterns of negative communication were reflected

in the subjective experience of both partners. An increase in negative communication over the course of the conflict interaction task predicted an increase in spouse's own and also their partner's negative feelings. It seems to be the quality or process of the conflict interaction not the fact of being in a conflict interaction influencing emotional well-being.

Theoretical Contribution

The current work adds to our understanding of why some couples escalate more in negativity than other couples, while also extending existing research on goal orientation by supporting the view that communication behavior of avoidance-oriented spouses is driven by a reactivity process. In other words, strong avoidance goals lead to strong negative cognitive and affective reactions in the face of a negative social challenge, which in turn leads to a higher likelihood of negative interpersonal behaviors.

Early studies of marital problem solving generally compared the behavior of distressed and non-distressed couples while they discussed a current problem in a laboratory setting (see Heyman, 2001). Such studies typically found that distressed couples were more likely than non-distressed couples to engage in negative behaviors and reciprocate negativity. If couples enter a conflict, they usually reach a certain level of negativity in their communication, accompanied by attempts to repair the interaction. Couples that fail to repair their communication seem to stay in an *absorbing state*, which is characterised by biased emphasis on the partner's negative affect at the expense of the ideas being proposed (e.g., angry tone of a phrase; Gottman, 1998, p. 180). These mechanisms are especially characteristic of dissatisfied couples, whereas satisfied couples are able to use meta-communicative strategies to exit a negative state (e.g., distraction, humor, finding common ground) and thereby reduce the salience of the negative elements of their communication. The present study provides supporting evidence that avoidance orientation in

spouses also may predict a similar cycle of negative communication independent of relationship satisfaction. Our sample reported relatively high relationship satisfaction, and, therefore, these couples should generally be successful in exiting negative cycles of interaction. Even within this group of relatively satisfied couples, however, avoidance-oriented spouses were prone to enact the same (or at least similar) negativity patterns as unhappy couples, accelerating and aggravating their negative exchanges rather than exiting from them. In contrast to relationship satisfaction, which affected spouses' negativity over time independently of their partners' behavior, the effect of avoidance orientation over time was affected by negative communication of the partner. This further supports the theoretical assumption that the reactivity process in avoidance-oriented spouses (i.e., strong negative cognitive and affective reactions in the face of a negative social challenge) leads to more negativity in interpersonal behavior.

In line with the notion of independent processes our data also revealed that avoidance orientation and relationship satisfaction are not correlated with each other. Given the association of relationship goals and couples' communication, on the one hand, and the association between communication and relationship satisfaction, one the other hand, one also might expect relationship goals to be associated with relationship satisfaction. However, our findings are in line with previous studies that also observed non-significant correlations between avoidance relationship goals and relationship satisfaction (Gable, 2006; Impett et al., 2010). One plausible moderator of the relationship between avoidance-orientation and relationship satisfaction might be the behavior of the partner. The results presented here suggest that only if the partner communicates negatively will avoidance-oriented spouses display negativity as well. That means that the partner's behavior might triggers processes that buffer or increase the adverse effect of spouses' avoidance goals on their relationship satisfaction.

Another interesting finding of the present study is that neuroticism did not have an impact on couples' communication negativity. Instead, spouses' avoidance goals predict how much negativity they express over time. The hierarchical model of approach-avoidance motivation (Elliot, 2006) argues that relationship goals might reflect a more proximal indicator of higher order personality constructs. For instance, neuroticism was shown to be a positive predictor for avoidance goals in the achievement context (Elliot & Thrash, 2002). However, replicating previous work, in our data neuroticism was not related to negative communication and did not account for the present findings (Caughlin et al., 2000; Donnellan et al., 2004; Karney & Bradbury, 1997). Relationship goals seem to be a more proximal predictor for couples' communication behavior than the higher level personality variable neuroticism. In sum, the present work indicates that there may be value in understanding communication processes as a reflection of underlying motivational tendencies. More specifically, avoidance orientation – beyond the influence of relationship satisfaction or neuroticism – might be a risk factor because it is translated into negative communication behavior that may lead to future relationship dissatisfaction.

Further, we found that patterns of negative communication related to the reactivity process increased negative feelings in spouses themselves and in their partners. This suggests that partners react emotionally to the escalation. It is likely that reoccurring experiences of (non-) resolution might affect expectations of whether future conflicts will be solved or not. For avoidance-oriented individuals this means that expectation as well as negative feelings following earlier discussions may decrease their motivation to engage in interactions with the partner again.

Our research contributes to the existing literature by replicating a phenomenon that has long been discussed in the literature but has never been documented using observational data on

intimate couples. Building upon suggestions from prior studies, our results lend further support for the ironic phenomenon that avoidance-oriented individuals display behavior that contradicts their stated goal of avoiding negative events. Although these individuals seek to avoid conflicts or situations that could harm their relationship, within the conflict itself they displayed negativity towards their partner that increased over time, especially when provoked by the partner's negative behavior. This *goal-behavior incongruence* can be explained via three different processes. First, one common explanation of this phenomenon is reciprocity of negative behavior of the partner due to increased sensitivity for negative stimuli or events. As mentioned before, avoidance orientation leads to heightened perceptual sensitivity and accessibility of negative information (Derryberry & Reed, 1994). As a result of this focus, highly avoidance-oriented spouses might be particularly likely to recognize negativity from their partner, leaving them more likely to reciprocate negative behavior. Accordingly, highly avoidance-oriented individuals are more likely to escalate their partner's behavior over time. Low avoidance-oriented spouses, on the other hand, may overlook or de-emphasize negativity from their partner, allowing them to reciprocate negativity less often and thus exit negative cycles of interaction.

Second, it has been proposed that highly avoidance-oriented spouses react with more negative affect to negative social events compared to low avoidance-oriented spouses (Gable, 2006). This negative arousal might impair their ability to effectively resolve a conflict. In other words, the initial goal might be superimposed by strong negative affective states and cognitions (Gable, 2006). In this case, avoidance-oriented spouses are not able to cope effectively with the affective arousal imposed by the conflict, leading to increased negativity towards the partner.

Third, high and low avoidance-oriented partners may differ in how they interpret a relationship conflict. The more avoidance-oriented individuals are, the more important it is to

stay away from situations that could harm the relationship. Therefore, any conflict might be interpreted as tantamount to failure by highly avoidance-oriented spouses. In this case, the behavior displayed is no longer goal-directed, because the initial goal of avoiding a conflict is already lost and boundaries to hold negativity back in order to achieve the goal are loosened. This might be similar to the processes described as the *what-the-hell effect* related to eating behavior (Polivy & Herman, 1985). While cognitive control allows one to eat in accordance with a caloric goal, it is also very susceptible to disruption. When restrained eaters start to deviate from that goal, they are usually incapable of stopping the slide. There is no need to attempt further restraint for that goal if a certain limit of calories is already exceeded. Thus, if avoidance-oriented spouses encounter conflict and negative affect, they maybe overuse negative behaviors because the initial goal becomes temporarily inoperative. Future research could measure goal accessibility under negative affective states or after negative social events to examine these processes in more detail.

Strength, Limitations, and Future Directions

The present study extends existing research regarding goal orientation in romantic relationship in several ways. First, the couples we sampled varied widely in relationship duration and age, adding generalizability to prior studies on similar phenomena that have relied on younger couples (e.g., Gable & Poore, 2008; Impett et al., 2010; Impett et al., 2008). Furthermore, research has mainly focused on examining cognitive and affective aspects related to relationship satisfaction (e.g., information processing, memory, experience of positive affect), and even though relationship research has demonstrated the importance of observational data (Gottman, 1994), to date only few studies on goal orientation in couples have included observational data (Impett, Gere, Kogan, Gordon, & Keltner, 2013; Impett et al., 2010). In most

of the studies that have associated goal orientation with observed behavioral data, one interaction task was treated as one unit of information, e.g., coders coded overall observed commitment or responsiveness in both partners during the interaction (Gordon, Impett, Kogan, Oveis, & Keltner, 2012; Impett et al., 2010). We aimed to build on this work by observing couples' communication behavior as it unfolds in a "natural" conflict discussion. Further, we administered sequential multilevel analyses to examine a) the influence of avoidance goals on own negative communication behavior over time and b) taking into account the occurrence of negative partner communication. These analyses allowed us to examine communication processes between spouses in a higher resolution than observed in earlier studies.

Notwithstanding these strengths, several factors limit interpretation of our findings. First, collecting data in a laboratory setting limits the relevance of our work to the daily lives of couples. With this task, we required couples to discuss an important problem in their relationship for 8 min. When such an issue arises in every day communication, couples usually have the option of avoiding such a discussion completely (Peterson, 1983) or spending more time addressing the issue in greater depth. It might be that avoidance-oriented spouses would not enter such a discussion and, therefore, would not experience the observed negative communication pattern. Our results suggest that if couples are forced to discuss a relationship-relevant problem, high avoidance-oriented spouses overreact and, as a consequence, display more negative communication behaviors. Furthermore, study procedures limited each interaction to 8 min length. Our analyses imply that avoidance-oriented spouses, when confronted with negative partner communication, enter a negative loop of communication that would persist beyond this 8 min interval. However, these couples will eventually have to exit the conflict – our data fail to address *how* or *when* they exit. It might be that avoidance-oriented spouses need more time, but

might use the same strategies to resolve the conflict as other couples. But it might also be that avoidance-oriented spouses eventually enforce termination of the conflict without any resolution or repair attempts. Future research should focus on exit strategies of avoidance-oriented spouses, as cognitions and affective states at the end of the interpersonal interaction might predict the quality of future interactions and long-term relationship satisfaction.

Despite the diversity of our sample in terms of age and relationship duration, couples reported relatively high levels of relationship satisfaction and, furthermore, relatively high levels of socioeconomic status (e.g., income, education), which might indicate that these couples are also less exposed to external stressors (e.g., job loss). Though this selection bias towards happy and well-situated couples might reduce generalizability, it need not weaken the present findings. The high level of satisfaction and low external stress might be the reason for the relatively low base rate of negative communication. With an average of 10% probability of negative communication being displayed in a sequence, couples seem to produce variance that is probably more restricted than it is in the population. This restricted variance could also lead to a more conservative testing, i.e., it is more difficult to obtain significant results. Future studies are needed to determine whether we would find the same patterns in more dissatisfied and less well-situated couples that display higher levels of negative communication.

Apart from this bias in the present sample, another reason for the low base rate might be that participants were videotaped which may have caused some reticence. Future studies may use electronically activated recorders to record conflict discussions in the couples' everyday life (Mehl, Vazire, Ramirez-Esparza, Slatcher, & Pennebaker, 2007) which may have more instances of negative communication. To account for the possible effect of the videotaping in the present study, we regarded the first 1.5 minutes of the discussion as warm-up phase. The cutoff was set

at the observed peak of negative communication across couples as we were interested in the escalation (or resolution) of a present conflict. Future studies might investigate more generally how negative communication unfolds over time in a typical conflict discussion in order to implement a standard warm-up phase for future research.

Another limitation of the present study is that analyses of different kinds of negative communication behaviors were not possible. As described earlier, different forms of negative communication like stonewalling, defensiveness and contempt were coded. Some of these behaviors rarely occurred during the conflict interaction (e.g., stonewalling was displayed by 8 women and 15 men; contempt by 9 women and 17 men). Therefore, a more differentiated analysis of negative communication was not possible. Examination of different forms of negative communication or of other established communication patterns in couples like the *demand-withdraw pattern* (Christensen, 1988) could give additional insights into relationship communication interacting with avoidance orientation. Therefore, it would be interesting to replicate our findings with a more diverse sample that displays more negativity and higher levels of dissatisfaction.

Another limitation is that sequences of 10 sec are rather long for the identification of micro-level communication patterns or reciprocity patterns. Within 10 sec a lot of things can be said, both negative and positive. To analyse reciprocity or time-lags between partners, coding with an even higher resolution would be needed (e.g., content coding; Hahlweg, Revenstorf, & Schindler, 1984). Thus, the term “reactivity processes” does not refer to a timely order of events, but to the fact that partners influence each other within the conflict discussion, such that spouses’ negative communication depends on their partner’s negative communication, especially, when spouses are highly avoidance-oriented.

Interventions and couple therapy often focus on inadequate, inefficient or even harmful communication behavior that leads to relationship distress, a decline in relationship satisfaction or dissolution (Baucom, Weusthoff, Atkins, & Hahlweg, 2012). Although replication is needed before the present findings can be extrapolated with confidence to applications with couples, our results suggest that an intervention should not only address ineffective behavior but also identify the underlying motivation of the specific behavior. Often the goal of communication training is to improve problem-solving skills and intimacy-focused communication, and to reduce dysfunctional interaction patterns (Markman, Stanley, Rhoades, & Whitton, 2008). The moderating influence of partners' communication behaviour supports this approach. However, emerging research suggests that behavioural skill training can backfire (Rogge, Cobb, Lawrence, Johnson, & Bradbury, 2013), possibly because individuals high in avoidance motivation are acutely sensitive to the threats posed by conflict and problem-solving conversations. Moreover, studies suggest that considering therapy-seeking clients' approach and avoidance goals increases the success of psychotherapeutic interventions (Berking, Grosse Holtforth, & Jacobi, 2003). The same might be true for couple intervention in the sense that understanding the motivational basis of interpersonal behavior might be particularly important in further optimizing relationship education training and tailoring interventions for couples.

Conclusion

This study indicates that goal orientation translates into observable behaviors known to be crucial for relationship functioning. Even though negative communication behavior is a well-known predictor of relationship dissatisfaction, to our knowledge, the concept of goal orientation has not been applied to these important behavioral aspects of relationship functioning. Our data suggest that avoidance-oriented spouses are particularly likely to participate in patterns of

reciprocated negativity that they are unable to exit once entered – mimicking a pattern that is common among unhappy couples. The present study also extends knowledge regarding the described *reactivity pattern* important in goal orientation literature and thus advances our understanding of relationship functioning.

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Footnotes

1 Manuals and more detailed information about the interaction coding systems are available from the Department of Psychology - Clinical Psychology for Children/Adolescents, and Couples/Families, University of Zurich, Switzerland, Prof. Guy Bodenmann guy.bodenmann@psychologie.uzh.ch.

2 Because the model did not reach convergence with the Laplace approximation procedure the model was estimated with a faster but less exact form of parameter estimation for generalized linear multilevel models by optimizing the random effects and the fixed-effects coefficients in the penalized iteratively reweighted least squares step.

3 Because we did not have any hypotheses regarding the influence of approach motivation on negative communication over time, we ran exploratory analyses and tested the unconditional and the conditional model with approach motivation as predictor. Approach motivation was assessed with four items such as “I will be trying to deepen my relationship with my partner”. Women reported a significantly stronger approach orientation compared to men (M = 6.08, SD = 0.83, α = .73 for women, and M = 5.89, SD = 0.83, α = .73 for men; $t(361) = 3.27$, $p < .01$). In the unconditional model, the main effect for approach motivation and the 2-way interaction between time and approach motivation were non-significant for both genders. Although, one might have expected a positive effect of approach motivation on average negative communication or resolution of conflict over time, this is not present in our data. Similarly, in the conditional model, the 3-way interaction between time, partner’s negative communication, and approach motivation was non-significant for both genders. These results indirectly support the reactivity

hypothesis: Avoidance orientation leads to strong reactions in the instance of a negative event (e.g., negative partner communication), approach motivation does not.

Table 1

Descriptive Statistics and Zero-Order Correlations for the Main Variables of the Study

		Men			Women								
	Variables	*M* (*SD*)	Min	Max	*M* (*SD*)	Min	Max	1	2	3	4	5	6
1	Avoidance Motivation[a]	5.06 (1.31)	2.00	7.00	4.88 (1.47)	1.00	7.00	-	.01	.03	.06	-.08	.02
2	Negative Communication[b]	3.85 (5.42)	0.00	33.00	4.03 (4.95)	0.00	33.00	.05	-	-.22	-.03	-.04	.03
3	Relationship Satisfaction[c]	4.38 (0.47)	2.43	5.00	4.33 (0.50)	2.29	5.00	-.07	-.33	-	-.30	-.24	-.26
4	Neuroticism[c]	2.37 (0.42)	1.15	3.60	2.64 (0.48)	1.44	4.30	.04	.10	-.27	-	.32	.25
5	$\text{Emotional State}_{\text{prior}}$[c]	2.28 (0.61)	1.00	4.25	2.45 (0.67)	1.00	4.50	-.03	.00	-.15	.30	-	.60
6	$\text{Emotional State}_{\text{after}}$[c]	2.29 (0.73)	1.00	4.25	2.49 (0.83)	1.00	5.00	-.02	.08	-.31	.19	.54	-

Note. Correlations for men are presented above diagonal and correlations for women below diagonal. Correlations $r > |.11|$ are significant at $p < .05$ (two-tailed).

[a] Means of men and women differ significantly at $p < .10$

[b] Average number of sequences with negative communication (out of 39 sequences).

[c] Means of men and women differ significantly at $p < .05$.

Table 2

Results from Multilevel Models Predicting Negative Communication Behavior in Distinguishable Dyads

Fixed Effects		Unconditional Model Estimate (SE)	Conditional Model Estimate (SE)
Intercept	Women	-2.700 (0.10) ***	-2.471 (0.10) ***
	Men	-3.171 (0.12) ***	-2.822 (0.12) ***
Time (within)	Women	-0.006 (0.00) *	-0.006 (0.00) *
	Men	-0.002 (0.00)	-0.003 (0.00)
Avoidance (between)	Women	-0.038 (0.06)	-0.050 (0.05)
	Men	-0.138 (0.07) +	-0.105 (0.06) +
Time*Avoidance	Women	0.006 (0.00) **	0.004 (0.00) *
	Men	0.003 (0.00)	0.001 (0.00)
Partner Communication (mean; between dyad)[i]	Women		6.755 (0.38) ***
	Men		9.661 (0.50) ***
Partner Communication (within dyad)	Women		0.306 (0.15) *
	Men		0.332 (0.16) *
Time*Partner Communication	Women		0.005 (0.01)
	Men		0.005 (0.01)
Avoidance*Partner Communication	Women		-0.228 (0.11) *
	Men		-0.147 (0.12)
Time*Avoidance*Partner Communication	Women		0.010 (0.01) +
	Men		0.011 (0.01) *
Intercept variance	Women	2.007 (1.42)	1.177 (1.09)
	Men	3.215 (1.79)	1.709 (1.31)
-2log likelihood		16043.749	15795.690
AIC		16065.749	15837.690
BIC		16156.790	16011.495

Note. SD = standard deviation, AIC = Akaike Information Criteria; BIC = Bayesian Information Criteria. i Estimates for mean centered partner communication is relatively big, because it accounts for 39 sequences. To get the real estimates, it has to be divided by 39.
*+ p < .10, * p < .05, ** p < .01, *** p < .001.*

Figure Captions

Figure 1. Interaction of time and avoidance orientation (AV) on the likelihood of spouses own negative communication behavior.

Figure 2. Interaction of time, avoidance orientation (AV) and negative partner communication (NPC) on the likelihood of spouses own negative communication behavior.

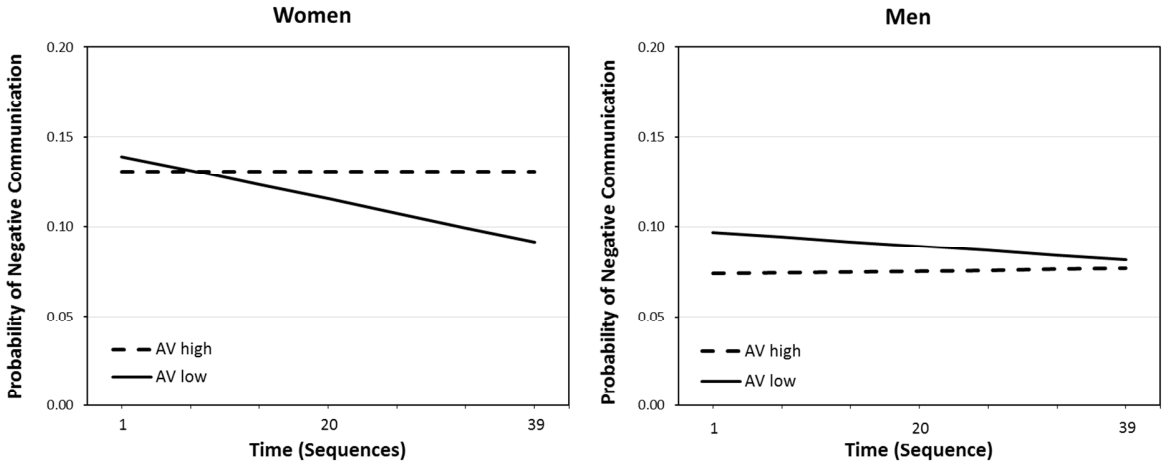
Women
Probability of Negative Communication
0.20
0.15
0.10
0.05
0.00
AV high
AV low
1
20
39
Time (Sequences)
Men
Probability of Negative Communication
0.20
0.15
0.10
0.05
0.00
AV high
AV low
1
20
39
Time (Sequence)

Figure 1

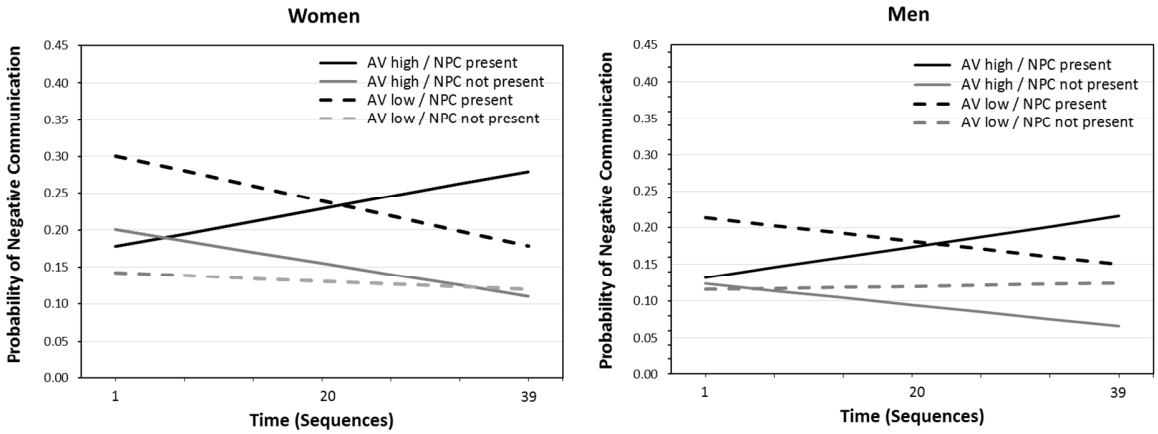
Women
Probability of Negative Communication
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
1
20
39
Time (Sequences)
AV high / NPC present
AV high / NPC not present
AV low / NPC present
AV low / NPC not present
Men
Probability of Negative Communication
Time (Sequences)
AV high / NPC present
AV high / NPC not present
AV low / NPC present
AV low / NPC not present

Figure 2